



of

# Seal and Sea Lion Haulout Sites in Washington



Washington  
Department of  
**FISH and  
WILDLIFE**

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**FISH AND WILDLIFE**  
Wildlife Science Division

February 2000

# Atlas of Seal and Sea Lion Haulout Sites in Washington

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February 2000



*California sea lion with Steller sea lion males on rock east of Tatoosh Island. Cover photo: Patrick Gearin*

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All photographs by Steven Jeffries unless otherwise indicated.

# About the Atlas and Maps

The purpose of this atlas is to provide information on haulout sites for harbor seals, Steller sea lions, California sea lions, and northern elephant seals located in Washington waters. Locations are provided in order to conduct assessment surveys as well as identify important sites used by these species relative to potential sources of disturbance, development, and other uses of Washington's marine environment.

This atlas divides the various marine waters of Washington into survey regions which are based on the timing of harbor seal pupping seasons in different marine areas of Washington. Locations of haulout sites were mapped for sites which have been identified during aerial, ground and boat surveys conducted by personnel from the Washington Department of Fish and Wildlife, National Marine Fisheries Service and Cascadia Research Collective as part of ongoing assessment efforts for these pinniped species in Northwest waters.

Maps were produced in encapsulated postscript format using Arc/Info, revision 7.0.4 GIS software developed by Environmental Systems Research Institute (ESRI). The maps are projected in Washington State Plane South Zone, Datum NAD27. The latitudes and longitudes listed in the tables and appendices are likewise in Datum NAD27.

Haulout sites were digitized using the ESRI GIS software from USGS 7.5 minute quadrangles with several exceptions. In British Columbia, the Vancouver Island, Gulf Islands, and Race Rocks sites were digitized from NOAA Chart 18400 at a scale of 1:200,000. The sites located around the mouth of the Fraser River, Roberts Bank, Boundary Bay and Mud Bay were digitized from 1:50,000 scale Canadian quadrangle maps. Buoy sites in Puget Sound were digitized from NOAA Chart 18440 at a scale of 1:150,000.

The digital base maps came from a wide variety of sources. The Washington State shorelines were produced by the Washington Department of Natural Resources (DNR) at 1:24,000. The British Columbia shoreline at a scale of 1:2,000,000 was produced by the BC Ministry of Environment, Lands and Parks. The Oregon coast shoreline at a scale of 1:100,000 was supplied by the Oregon State GIS Service Center.

Mudflats and sandbars were derived largely from the National Wetlands Inventory (NWI) database. Some areas were updated using USGS 7.5 quadrangle maps and 1:50,000 Canadian quadrangle maps. Columbia River mudflats and sandbars were enhanced using data derived from the Washington River Information System (WARIS) developed by the Washington Department of Fish and Wildlife and Bonneville Power Administration.

U.S. Fish and Wildlife Service site codes were used as necessary to identify rocks and islands in the Washington Islands and San Juan Islands National Wildlife Refuges.

# Explanation of Map Codes

**Site Code:** Code used within Washington State Department of Fish and Wildlife and National Marine Fisheries Service databases only.

**Use code:** Indicates the tidal state when a species is most likely to be hauled out at a site. “Low” means use of the site is primarily during low tide (i.e. intertidal shoals and reefs). “High” means use of the site is primarily during high tides (i.e. at channels near river mouths). “All” means use of the site is independent of tidal levels (i.e. log booms, buoys or floats).

# Species Accounts

## Harbor Seal (*Phoca vitulina richardsi*) Species Code: Pv

L: 75 to 180 cm; Wt: 9 to 120 kg; short coarse hair at birth; color ranging from pale or whitish w/black spots to nearly black overall, w/scattered whitish rings; flippers haired w/strong claws; two mammae.

This small, stocky seal is found throughout the temperate and arctic waters of the northern hemisphere, and has the widest distribution of any pinniped. It is considered a non-migratory species, breeding and feeding in the same area throughout the year. In water, harbor seals use their hind flippers for propulsion, but on land they hitch along using only its fore flippers.

The harbor seal is the most common, widely distributed pinniped found in Washington waters, and is frequently sighted by recreational boaters, ferry passengers and other users of the marine environment. Harbor seals use hundreds of sites to rest or haulout along the coast and inland waters, including intertidal sand bars and mudflats in estuaries, intertidal rocks and reefs, sandy, cobble, and rocky beaches, islands, logbooms, docks, and floats in all marine areas of the state. Group sizes typically range from small numbers of animals on some intertidal rocks to several thousand animals found seasonally in coastal estuaries. Males and females are similar in size (to 250 lbs) and coloration. Pelage patterns are typically a light colored base pelage with dark spots, although some individuals have a pelage which is reversed in coloration (dark colored base with light spots).

The harbor seal is the only pinniped species which is found year-round and breeds in Washington waters. Pupping seasons vary by geographic region, with pups born in coastal estuaries (Columbia River, Willapa Bay and Gray Harbor) from mid-April through June; Olympic Peninsula coast from May through July; San Juan Islands and eastern bays of Puget Sound from June through August; southern Puget Sound from mid-July through September; and Hood Canal from August through January. Females produce one pup per year, beginning at age four or five. Pups are precocious at birth, capable of swimming and following their mothers into the water immediately after birth. Pups typically remain with their mothers until weaning at 4-6 weeks of age. Pups call for their mothers until weaned with a sheep-like “m-a-a-a”; adults utter a variety of sounds including grunts, growls and barks.



*Harbor seal female with nursing pup at Gertrude Island.*



## California Sea Lion (*Zalophus californianus*) Species Code: Zc

L: 76 to 245 cm; Wt: 6 to 450 kg; short dense hair; chocolate brown in color; naked flippers about 1/6 of overall length; four mammae; barks.

The California sea lion is the most frequently sighted otariid found in Washington waters and uses haulout sites along the outer coast, Strait of Juan de Fuca, and in Puget Sound. Haulout sites are located on jetties, offshore rocks and islands, logbooms, marina docks, and navigation buoys. This species also may be frequently seen resting in the water (rafted) together in groups in Puget Sound.

Only male California sea lions migrate into northwest waters, with females remaining in waters near their breeding rookeries off the coast of California and Mexico. This species was considered rare in Washington waters prior to the 1950's. Today peak numbers of 3,000-5,000 animals move into northwest waters (Washington and British Columbia) during the fall and remain until the late spring when most return to breeding rookeries in California and Mexico. Peak counts of over 1,000 animals have been made in Puget Sound in recent years. All age classes of males are present in Washington water, with animals ranging in size from 200 to 1000 lbs. Coloration of males is usually a dark or chocolate brown. The high forehead or sagittal crest with bleached out fur on top of the head is distinctive in adult males. Vocalizations can be described as barking.



California sea lion male on navigation bouy off Shilshole Bay in Puget Sound. Photo: Patrick Gearin



## Steller Sea Lion (*Eumetopias jubatus*) Species Code: Ej

L: 105 to 320 cm; Wt: 18 to 1,100 kg; short, coarse hair; tawny to brownish; flippers very large, blackish, naked w/small nails; hind flippers about 1/5 of overall length; four mammae; growls.

The Steller (or Northern) sea lion is the largest of the eared or otariid seals found in Washington waters and uses haulout sites primarily along the outer coast from the Columbia River to Cape Flattery, as well as along the Vancouver Island side of the Strait of Juan de Fuca. Although breeding rookeries are located along the Oregon and British Columbia coasts, no breeding rookeries are found in Washington. Over its range, Steller sea lion population numbers have declined significantly over the last 15 years and the species is currently listed as either “Threatened” or “Endangered” under the Endangered Species Act.

In Washington, Steller sea lion numbers vary seasonally with peak counts of 1,000 animals present during the fall and winter months. Haulout sites are found on jetties, offshore rocks and coastal islands. This species may also be found occasionally on navigation buoys in Puget Sound as well. Both sexes are found in Washington waters, with males considerably larger (to 2,200 lbs) than females (to 700 lbs). Coloration varies from tawny through yellowish brown to dark brown. Vocalizations from adults can be described as a deep growling sound.



*Steller sea lion male with California sea lions at tip of South Jetty, Columbia River.*

## Northern Elephant Seal (*Mirounga angustirostris*) Species Code: Ma

L: 120 to 600 cm; Wt: 35 to 3,600 kg; adult males possess a large, inflatable proboscis; hair short, sparse, grayish to brownish; flippers haired w/small claws; fore flippers slender, pointed; middle toes of hind flippers much shorter than outer; two mammae.

Northern elephant seals are the largest pinniped found in Northwest waters. A large adult male may weigh in excess of 2,000 lbs and is readily identified by a large inflatable proboscis. Females are considerably smaller in size (up to 1,000 lbs) and lack the inflatable proboscis. Breeding rookeries are located on beaches and islands in California and Mexico. Following both their winter breeding season and annual molt cycles, individuals disperse northward along the Oregon and Washington coasts. Males travel to feeding grounds in the Gulf of Alaska south of the Aleution Islands; females feed in deep off-shore waters between 35° and 45° N.

Solitary individuals occasionally seen in Washington inland waters. A few individuals use beaches at Destruction, Protection and Smith/Minor Islands as well as Dungeness Spit as haulout sites. In recent years, pups have been occasionally recorded at these sites as well. The northern elephant seal population has increased substantially in recent years and numbers in excess of 100,000 animals.



*Northern elephant seal male resting on beach at San Miguel Island, California.*



*Northern elephant seal females resting on beach at San Miguel Island, California.*

# Pinniped Haulout Regions

This haulout site atlas divides the marine areas of Washington state and adjacent waters into 14 survey regions as follows:

- Region 1** Columbia River (Pacific Ocean to Cowlitz River)
- Region 2** Willapa Bay
- Region 3** Grays Harbor
- Region 4** Olympic Coast-South (Quillayute River to Point Grenville)
- Region 5** Olympic Peninsula-North (Cape Flattery to Quillayute River)
- Region 6** Strait of Juan de Fuca-West (Cape Beale to Port Angeles)
- Region 7** Strait of Juan de Fuca-East (Port Angeles to Whidbey Island)
- Region 8** Hood Canal
- Region 9** Eastern Bays (Boundary Bay to Port Gardner)
- Region 10** Puget Sound (Whidbey Island to Olympia)
- Region 11** San Juan Islands (Rosario Strait)
- Region 12** San Juan Islands (San Juan Channel)
- Region 13** San Juan Islands (Haro Strait)
- Region 14** British Columbia (Fraser River to Race Rocks)

# Pinniped Haulout Regions Washington State and Adjacent Waters

